TO: MFD On (note date): 1 DEC 2004 Pat. No. 6817603
Team Leaders Initials
INFO SUPPLIED BY: JW 9/930239
OAC/LDRC Initials

SECOND REQUEST (DIFFERENT CORRECITONS), SUPERSEDE OR RECONSIDERATION
(OAC OR LDRC, USE A RED PEN FOR COMPLETING INFO, ON THIS COVER SHEET) (11/2002 cbn)

Team Leader, an Office Automation Clerk may assist you by supplying data from CofC Database (Current & History), PALM, and copies from Intranet, to determine type of request (second request, supersede, and/or reconsideration) and to determine if there were any errors made in decisions and/or publishing are attributable. Team Leader, check appropriate boxes below, key record (if necessary) and forward to JCWS, to order file and assign file to an LIE, to EXPEDITE.

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Date Assigned: ___/___/___ Turned In: ___/___/___

CofC Issued: ___/___/___ CofC Denied: ___/___/___ Updated: Y / N Date: ___/___/___

Patent number listed on C of C listing in OG (circle one) Y / N

CofC Issued for this record is attached to patent on Internet (circle one) Y / N

New/different correction(s) requested. Check Intranet or with RTIS. (circle one) Y / N

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(Revised 12/15/2003 cbn) #4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Bent Karsten KOFOD	Confirmation No.: 9485
Patent No.: 6,817,603 B2	Application No.: 09/930,239
Patent Date: November 16, 2004	Filing Date: August 16, 2001
For: CLAMPING TOOL	Attorney Docket No.: 81421-4532

REQUEST FOR CERTIFICATE OF CORRECTION UNDER 37 C.F.R. § 1.322

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Patentees hereby respectfully request the issuance of a Certificate of Correction in connection with the above-identified patent. The corrections are listed on the attached Form PTO-1050, submitted in duplicate. The corrections requested are as follows:

On the title page, Item (73) Assignee, after "Låsby", please delete "(DE)" and insert -- (DK) --. Support for this change can be found on the Issue Fee Transmittal where the residence data to be printed on the patent is indicated as "LÅSBY, DENMARK".

At column 6, line 26 (claim 5, line 25), after "connection which", please delete "an" and insert -- in --. Support for this change can be found in application claim 5.

The requested corrections are for errors that appear to have been made by the Patent Office. Therefore, no fee is believed to be due for this request. Should any fees be required, however, please charge such fees to Winston & Strawn LLP Deposit Account No. 50-1814. Please issue a Certificate of Correction in due course.

Respectfully submitted,

11/24/04
Date

Allan A. Fanucci, Reg. No. 30,256

WINSTON & STRAWN LLP
Customer No. 28765

212-294-3311

DC:388707.1

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO.: 6,817,603 B2
DATED: November 16, 2004
INVENTORS: Kofod

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title Page:
Item (73), Assignee, after "Låsby", delete "(DE)" and insert -- (DK) --.

Column 6:
Line 26, after "connection which", delete "an" and insert -- in --.

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO.: 6,817,603 B2
DATED: November 16, 2004
INVENTORS: Kofod

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title Page:
Item (73), Assignee, after "Låsby", delete "(DE)" and insert -- (DK) --.

Column 6:
Line 26, after "connection which", delete "an" and insert -- in --.

US006817603B2

(12) **United States Patent**
Kofod

(10) **Patent No.: US 6,817,603 B2**
(45) **Date of Patent: Nov. 16, 2004**

(54) **CLAMPING TOOL**

(75) Inventor: **Bent Karsten Kofod**, Kalundborg (DK)

(DK)

(73) Assignee: **Danpres A/S**, Låsby (DE)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/930,239**

(22) Filed: **Aug. 16, 2001**

(65) **Prior Publication Data**

US 2002/0020953 A1 Feb. 21, 2002

Related U.S. Application Data

(63) Continuation of application No. PCT/DK00/00064, filed on Feb. 17, 2000.

(30) **Foreign Application Priority Data**

Feb. 17, 1999 (DK) 1999 00206

(51) **Int. Cl.**[7] **B25B 1/14**
(52) **U.S. Cl.** **269/228**; 269/201
(58) **Field of Search** 269/228, 237, 269/201, 236, 238

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* cited by examiner

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(57) **ABSTRACT**

A clamping tool serving for clamping a workpiece on a support by a bar system constructed of a number of mutually pivotal bars comprising an activation bar for at operation making the bars pivot mutually between an initial position and locking position, a clamping bar having at least one clamp shoe for pressing against the workpiece in the locking position of the bar system, and a base for mounting the bar system on the support. The bar system furthermore comprises two toggle joints arranged to simultaneously or almost simultaneously assume their dead point positions when the bar system at activation is taken from the initial position to the locking position. In the dead point positions the two toggle joints form an angle with each other. Thereby the clamping tool according to the invention is rendered capable of simultaneously acting on a workpiece which is to be clamped on a support with compressive forces in at least two directions so that the number of the clamping tools required for a given task can be reduced by one half compared to the number that is required when conventional clamping tools are used.

22 Claims, 2 Drawing Sheets

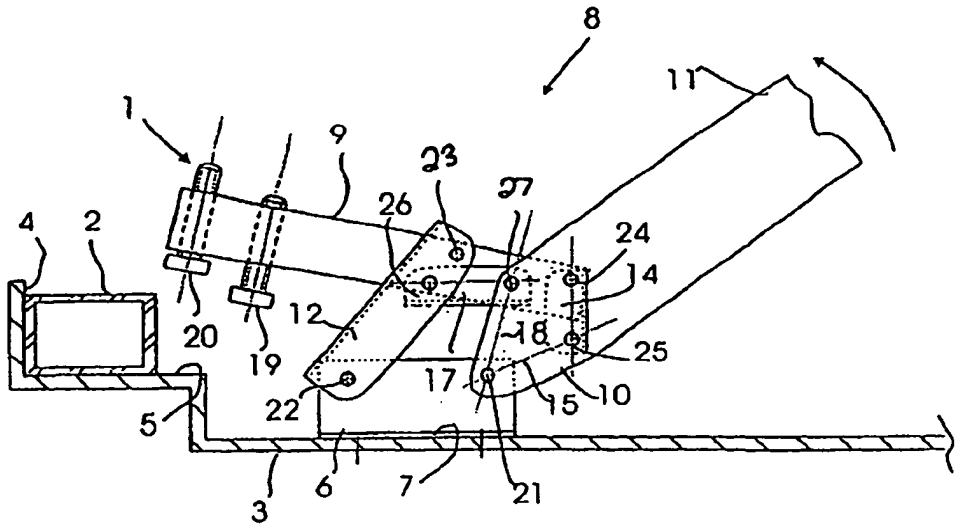

FIG. 3 shows that the activation bar **10** of the bar system is constructed as a fork which in order to form a good handle is more narrow at the top. It is furthermore shown that the base **6** is shaped as an inverted U with two fastening flaps **7** extending out to each their side from the U.

The clamping bar **9** consists in the case shown in FIG. **4** of a bent flat bar having two legs **28** and **29** that at the end near the clamp shoe leave a gap **30** between them for taking up the clamp shoes while the legs at the other end are placed close together and thereby forming a shank **31** for fitting in between the rest of the bars. In the shank are holes for the swivel pins **23** and **24**.

In one exemplary embodiment, the bar system **8** includes a first swivel connection **21** for pivotally journaling one end of the activation bar **10** in the base **6** while the other end of the activation bar **10** is free and serves as handle **11** of the clamping tool. A rocking bar **12** is pivotally journaled in the base **6** via a second swivel connection **22** which is nearer to the clamp shoes **19, 20,** than the first swivel connection **21**. The other end of the rocking bar **12** is pivotally journaled in the clamping bar **9** via a third swivel connection **23**. A first toggle joint **13** has a first joint **14** which is pivotally journaled in the clamping bar **9** via a fourth swivel connection **24**, located farther from the clamp shoes **19, 20** than the third swivel connection **23**. The other end of the first joint **14** is pivotally journaled in the activation bar **10** via a fifth swivel connection **25**. The first toggle joint **13** also has a second joint **15** consisting of the part of the activation bar **10** that is extending from the fifth swivel connection **25** to the first swivel connection **21**. A second toggle joint **16** has a first joint **17** which at one end is pivotally journaled in the rocking bar **12** and/or clamping bar **9** via a sixth swivel connection **26**, and at the other end is pivotally journaled in the activation bar **10** via a seventh swivel connection **27**. When the clamping tool is in the locking position, the seventh swivel connection **27** is nearer the clamp shoes **19, 20** than the first swivel connection **21** and the fifth swivel connection **25**. The second toggle joint also includes a second joint **17** consisting of the part of the activation bar **10** that is extending between the seventh swivel connection **27** and first swivel connection **21**.

What is claimed is:

1. A clamping tool for clamping a workpiece by means of a bar system constructed of a number of mutually pivotal bars and comprising an activation bar for making the bars pivot mutually between an initial position and a locking position, a clamping bar having at least two clamp shoes for pressing against the workpiece in the locking position, and a base for mounting the bar system on the support, wherein the bar system furthermore comprises at least two toggle joints each toggle joint comprising two joints pivotally connected to one another, said two toggle joints arranged to substantially simultaneously assume a dead point position when the bar system is taken from the initial position to the locking position, and further wherein said two toggle joints form an angle with each other in the dead point positions.

2. The clamping tool according to claim **1**, wherein the two joints of each toggle joint together form an angle than points its point in the opposite direction of the at least one clamp shoe in the initial position of the bar system.

3. The clamping tool according to claim **1**, wherein the two joints and respectively of each toggle joint together form an angle that point its point in a direction towards the at least two clamp shoes in the locking position of the bar system.

4. The clamping tool according to claim **3**, wherein the angle that the two joints of each toggle joint form together in the locking position of the bar system is between about 175° and about 180°.

5. The clamping tool according to claim **1**, wherein the bar system comprises:

a first swivel connection for pivotally journaling a first end of the activation bar in the base while a second end of the activation bar is free and serves as handle for the clamping tool;

a rocking bar which at a first end is pivotally journaled in the base via a second swivel connection which is nearer the at least two clamp shoes than the first swivel connection and at a second end is pivotally journaled in the clamping bar via a third swivel connection;

a first toggle joint having a first joint which at a first end is pivotally journaled in the clamping bar via at fourth swivel connection which is farther from the at least two clamp shoes than the third swivel connection, and at a second end is pivotally journaled in the activation bar via a fifth swivel connection, and a second joint consisting of the part of the activation bar that is extending from the fifth to the first swivel connection; and

a second toggle joint having a first joint which at a first end is pivotally journaled in one of the group consisting of the rocking bar and the clamping bar via a sixth swivel connection, and at a second end is pivotally journaled in the activation bar via a seventh swivel connection which in the locking position of the clamping tool is nearer the at least two clamp shoes than the first and the fifth swivel connection, and a second joint consisting of the part of the activation bar that is extending between the seventh and the first swivel connection.

6. The clamping tool according to claim **5**, wherein the third and the sixth swivel connection coincide.

7. The clamping tool according to claim **5**, wherein the sixth swivel connection is placed on the rocking bar between the second and the third swivel connection.

8. The clamping tool according to claim **1**, wherein the first and the second toggle joint pass the dead point positions simultaneously when the bar system is taken from its initial position to its locking position.

9. The clamping tool according to claim **1**, wherein the first joint of the first and second toggle joint respectively is shaped as a U having a bottom and two sides.

10. A clamping tool comprising:

a base member;

a bar system mounted to the base member and comprising a plurality of mutually pivotal bars including:

an activation bar pivotally mounted to the base member and being provided with a handle member;

a rocking bar also pivotally mounted to the base member and operatively connected to the activation bar via a first toggle joint,

a clamping bar operatively connected to the activation bar via a second toggle joint and being pivotally mounted to said rocking bar, the clamping bar including at least two clamp shoes;

wherein the first toggle joint comprises a first joint pivotally connected to a second joint, and the second toggle joint comprises a first joint pivotally connected to a second joint;

further wherein the first and second toggle joints substantially simultaneously assume respective dead point positions, when the bar system is moved from a first, unlock position to a second, locked position, and the first and second toggle joints form an angle with respect to one another when in the dead point positions.

Day : Tuesday
Date: 11/30/2004

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Time: 12:08:19

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